a lesion of the peripheral nerves and terminal filaments. In some of his cases, similar to that described by the last speaker, there had been originally an eczema, or some slight form of trauma, which had ultimately become a mere dermal illusion. Regarding the case reported by Dr. Thomson, he said that it compelled him to admit that those paresthesias might be caused by central brain lesions. He could confirm Dr. Jacoby's statements regarding the effect of tobacco, for he had seen obstinate and distressing paresthesias of the hand, which disappeared very rapidly on giving up the tobacco. The authors that he had consulted had not made systematic observations of the temperature of the skin. In reply to Dr. Rockwell he would say that after pneumonia and typhoid fever he had only seen the general anesthesias such as were observed in the mild types of neuritis. He had had some experience with the troublesome cases of "burning heels," and had come to believe that many of them, at least, were due to a certain degree of traumatism, resulting, perhaps, in periostitis.

A CONSIDERATION OF FLECHSIG'S "GEHIRN UND SEELE."

Dr. Mary Putnam Jacobi read a paper with this title. (See page 747.)

Mr. Marshall said that psychologists looked with some doubt upon the positive statements made by many of the modern neurologists. It seemed rather startling that the neurologist paid little attention to psychology. He was certain that if Flechsig had followed the development of modern psychology, he could never have written the book under consideration. He agreed most heartily with all the criticism presented by Dr. Jacobi. It was impossible to hold any such view of sensation as Flechsig apparently did. It could not be looked upon as though existing alone—it was a part of the whole pulse of consciousness—a sort of "streak" in our conscious life. The whole mass of the consciousness of the moment must be taken into account. Sensation seemed like the top of a wave, or a particular kind of increment to this mass of consciousness. Flechsig's position certainly seemed to be determined by the old-fashioned view of the separation of the soul from the mind, but modern psychology considered consciousness only—the soul, the *ego*, was a part of consciousness. Consciousness from a certain standpoint could be looked upon as divided into the field of attention and the field of inattention. There was no absolute separation between the two. Stout, a recent author, distinguished between moetic and amoetic consciousness, and the soul is a part, if not the whole, of this field of inattention. His own personal view is that the "empirical ego" was nothing more than the field of inattention to which the items of attention are added. Flechsig's view of association also was not in accord with modern doctrine, and the whole notion of association, as held in the early part of the century, was fast disappearing. The notion of the addition or summation or semi-chemical combination of sensations had been entirely dropped. Psychologists also looked with some doubt upon the statement of the neurologists regarding a record in the cortex, for nothing in the consciousness gave any reason for believing this. The psychologist believed that it was impossible for any two successive stages of conscious life to be the same. Each addition to our psychic life changed the whole of it, and there was no such thing as the reduplication of any conscious phenomenon, so that the notion of "storage" and physical residue or record in certain centres was not acceptable to the psychologist. Each added state changed the whole pulse of mental life; apparently the brain itself was altered as a whole.

Dr. S. E. Jelliffe remarked that he thought that Flechsig's idea broke down when he explained the intercalation of the frontal lobe between the olfactory and somesthetic areas.

Dr. Hirsch said that the attacks on Flechsig's theory had become exceedingly numerous. To his mind, the principal theory did not seem at all new; it simply consisted in dividing the psychical functions of the brain as such from the lower functions, i. e., the different sense perceptions and the lower motor functions. The really new thing introduced by Flechsig's theory was the localization of these two functions in special areas of the brain. His reasons for such localization were: (1) The later development (as Flechsig claimed to have proved); and (2) that these purely psychical areas belong exclusively to the association system. If this could be proved, the whole theory would stand. The objections of H. Sachs, of Breslau, were based on some published pathological cases. Among others, there was a case in which the whole occipital lobe and the part of the cortex which Flechsig claimed to be the entire perception centre for vision, were destroyed. According to this theory, there should have been a degeneration of the optic coronary system, yet H. Sachs found this system intact, and he concluded, therefore, that this system must necessarily be in connection with other portions of the brain, and hence, that Flechsig had no right to claim that the parietal convolutions were association centres. The speaker said that he could not accept this argument of H. Sachs. Any degeneration in this optic coronary system must be centripetal; hence H. Sachs had no right to expect a centrifugal degeneration.

With regard to the differences of development, the speaker said that every other organ of the body was perfectly developed as regards function immediately at birth—e. g., in the case of the heart or the kidneys—yet the brain of the new-born child was far different from that of an adult. Why should not this well-known gradual development of the brain have the anatomical basis assured by Flechsig? He thought, with Flechsig, that there was a certain proportion between the time of medullization and the development of function. From a purely psychical point of view it seemed to him that Flechsig's theory could be sustained. The idea of the different localizations of the intellectual powers was in full accord with our psychiatric experience. One portion, it was well known, could be diseased without intellectual impairment. This was seen every day in cases of melancholia. The anatomical part of Flechsig's theory was undoubtedly open to much criticism, but Flechsig had opened a new channel of investigation—a combination of anatomical and clinical research—which should make his theory welcome as an attempt which would, in time, bring great benefit to psychology.

Dr. Joseph Collins said that, if time permitted, he could show that the reader of the paper had not done Flechsig justice, at least from an historical standpoint. For instance, statements made more than twenty years ago should not be cited as reflecting that writer's state of mind or belief to-day, especially when such statements are at variance with recent utterances. The essay, " Gehirn und Seele," had been followed by a torrent of criticism, but many of the objections had been satisfactorily controverted in the author's last essay on cerebral localization. When this last essay was read at the Congress of Psychologists at Zurich, psychologists in both Europe and America were very much in accord in the admission that it satisfied their faculties of ratiocination at that time, and Baldwin, of Princeton University, in his report of the paper to an American periodical, had no criticism to make, except to say that the claims should not be accepted too hurriedly. Flechsig's anatomical contentions have been cited in great detail by Van Gehuchten in the recent edition of his admirable work, and, although, he does not say in so many words, that he is partisan to all of Flechsig's claims, the space given to these views in his book may be taken as an index of their importance in the author's estimation. Other reputable anatomists and psychologists have corroborated many of Flechsig's claims, and it would, therefore, seem to the speaker that the necessity of proving the attributed speciousness of these claims was enormously with his critics.

It could be shown that the localization of functions in certain areas of the brain, as stated by Flechsig, coincided exactly with the allocation of function to these parts by clinicians and psychologists the world over. The central visual representation was in the occipital lobe, and especially in that portion known as the cuneus, an area to which it was confined years before by Seguin, Henschen, Wilbrand, et al. The " Körpergefühl " area of Flechsig corresponded with the area in the central convolutions which Dana had shown from clinical and physiological experience was concerned in the interpretation of tactile sensibilities, and so on throughout the entire list of centres. The same might be said of the association areas which Flechsig believes are intercalated between areas of specialized or highly specialized functions.

Mr. Marshall had said that the notion of "storage" and of physical residua or record, the result of impingement of sensory stimuli on the brain was not acceptable to the psychologist, and the speaker was glad to hear that they were as sensitive to the imperfections of this nomenclature as was the physician, for, except as a colloquial expression, it was not acceptable to the latter. Yet, until a word can be found which will explain that the potentialities of a specialized area of the brain is changed by having given reception to a stimulus, whether the change be a chemical, a psycho-physical, or a physical one, we shall have to make use of this term at its current value, which is moderately stable, and not in a literal sense. Probably no one was ready to accept Flechsig's teachings in toto, but they are too important, and too uniformly in accord with the teachings of anatomy, physiology and psychology, to be dismissed after a few minutes of scholastic indulgence or with a personal estimate of flimsiness.

The President said that he had discussed this subject in an address delivered at Baltimore last May. He had always had unbounded confidence in anything published by Flechsig, and had gone at the task very seriously; yet he did not think that anyone who had had any sort of training in psychology or philosophy or logic could accept Flechsig's presentation of the subject. First of all, the evidence presented was insufficient. This deficiency had been acknowledged quite recently even by one of Flechsig's ablest students. The theory of the coincidence of function with the development of the various medullated tracts seemed to have been carried too far. If Flechsig's theory were correct in this point, why should speech fibres be developed fully (as he said) at the third or fourth month of life? We were all agreed as to the extent of the somesthetic area, but his argument went further. Flechsig had taken almost the entire outlying distrists and called them association *centres*, intellectual centres, not tracts. These centres, he said, simply connected the various areas of the brain, and connected sensory with motor areas. If true, the frontal lobe's chief function should be to combine the somesthetic area with the sensory speech area or tactile area. From our knowledge of tumors in the frontal lobe it was evident that there were other very important functions than could be assigned to it on the basis of Flechsig's theory. The latter seemed to him to be open to a number of serious objections which he had stated in some detail in the American Journal of Insanity.

Dr. Jacobi, in closing the discussion, said that no one could doubt the position of Flechsig as an anatomist. It was not necessary to dispute what he had established anatomically; her object had been to show how much that was not anatomical he had added to pure anatomical facts. There was really very little foundation of fact for all his fanciful conclusions.

THE MANNER IN WHICH THE LAW FORBIDDING THE PUBLIC REPRESENTATIONS OF HYPNOTISM OUGHT TO BE MODIFIED. By Dr. Croq., Jr. (Journal de Neurologie et d'Hypnologie, No. 15.)

C., in discussing the subject under title, arrives at the following conclusions:

1. Hypnotism presents great dangers for the subjects (sujets) and for society. 2. It is absolutely necessary that the law should prevent the occurrence of these accidents. 3. It is possible to simulate all the experiments of hypnotism. 4. In educating (training) an individual one can succeed in developing in him a state which has all the appearances of the wake state, and yet reduce the individual to a condition of complete automatism. 5. It is sometimes absolutely impossible for the most experienced expert to say whether or not an individual is under hypnotic influence. 6. The public representations of simulated hypnotism present absolutely the same dangers as do the public séances of actual hypnotism. 7. In order to entirely prevent these accidents, the law must forbid not only the real representations of hypnotism but also the simulated ones.

Drs. Delbœuf, De Rode and Crocq., Jr., were asked as experts to investigate whether Donato's public demonstrations of hypnotism were indeed simulated, as he swore them to be before the courts of Belgium, or real. The said experts made Donato repeat before them the experiments which he had demonstrated before the public; they further repeated these experiments themselves and found that the "subjects" (sujets) were perfectly awake during the whole time of the experiments.

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